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Betty Perkins: A giant in nuclear weapons research

Reports amassed after testing ban are vital to today's work

By Andrew Gordon, Weapons Librarian, [National Security Research Center](#)

Today's nuclear weapons research builds upon the work of the past, often on the shoulders of the giants of nuclear document preservation in the absence of testing. One of these giants is weapons historian Betty Perkins.

Before her retirement in 2016, Perkins held numerous roles at LANL, but she is best known for her pioneering work in the Weapons Program where she generated classified reports on nuclear weapons design and development.

Over many years, she meticulously researched and recorded the histories of a number of critical efforts in Los Alamos's nuclear weapons program, culminating in 13 reports comprising more than 7,200 pages.

"The Lab's National Security Research Center (NSRC) houses, maintains and makes the reports accessible to weapons scientists and engineers," said Chris C'de Baca, the Group Leader who manages the NSRC. "Betty Perkins' reports are vital to today's national security research, and in particular the Lab's stockpile stewardship, which assures the world that we have safe, secure and reliable nuclear weapons."

Who was Betty Perkins?

An environmental scientist turned historian, Perkins worked in the Los Alamos Weapons Program for the last 25 years of her career. She was a Texas native, but spent most of her childhood in Santa Fe. Perkins attended the College of Wooster in Ohio and the Harvard Radcliffe Institute, earning a master's degree in physics. While working at Los Alamos, she met her husband Roger, who was a physicist. The couple were married for more than 50 years and had three daughters.

Meanwhile, Perkins was forming her legacy at the Lab.

After the end of nuclear testing in the 1990s, then-Laboratory Associate Director for Weapons John Hopkins decided to formally document the history of nuclear testing.

"Perkins took on the project with a conscientious fervor that would prove vital to today's researchers and their national security work," said Riz Ali, Director of the NSRC. "The reports have formed a foundation for the Lab's nuclear weapons documentation, and have been expanded over the years."

What's inside?

Perkins's reports are compendiums of weapons research knowledge; they include

- handbooks on modern primaries,
- safety and surety,
- the design and development of the Laboratory's stockpile weapons systems, such as the W76, the W88, and the B61.

Perkins's work has proved as invaluable today as when she first compiled this documentation, say those who rely on the reports.

“Her multi-point safety report is an important reference for my staff,” said Erik Shores, Safety and Surety (XTD-SS) Group Leader, who worked with Perkins before she died in 2019. “My researchers are often overwhelmed when looking for documents on one-point or multi-point safety, as there are thousands of references. Perkins neatly summarized the topics into something that is much more approachable and easier to understand. Her attention to detail and liberal use of footnotes make these guides invaluable to us.”

How can I access the Betty Perkins Reports?

The reports are available to Online Vault users and can be accessed by searching for her as the author. Need Online Vault access? [Apply here](#).

Have questions? Need research assistance?

Contact the National Security Research Center at nsrc@lanl.gov, or visit nsrc.lanl.gov.

Photos:



<https://drive.google.com/file/d/1-ljQWooafwSAym654aoHA-c2W2t27nwL/view?usp=sharing>

Caption: Former Lab Historian Betty Perkins compiled nuclear weapons reports that today's researchers rely on for their mission-related work. Perkins was a long-time Los Alamos staff member, who was remembered fondly after she retired in 2016. She died in 2019.



https://drive.google.com/file/d/1cQttrzqkpWaGMUfuGrXHZ9f-S_bjgwc1/view?usp=sharing

Caption: The Betty Perkins reports include handbooks on fission weapons components that initiate reactions, ensure safety and surety, and safeguard the design and development of the Lab's stockpile weapons systems, such as the W76, the W88, and the B61. These classified records are part of the collections in the Lab's National Security Research Center.